



DOCKET NO.: H0498.70112US01

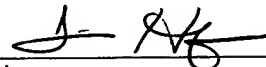
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Charles M. Lieber, et al.  
Serial No.: 10/812,653  
Confirmation No.: 3416  
Filed: March 29, 2004  
For: NANOSCOPIC WIRE-BASED DEVICES, ARRAYS, AND  
METHODS OF THEIR MANUFACTURE  
Examiner: Howard Weiss  
Art Unit: 2814

---

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to **MAIL STOP AMENDMENT**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 29 day of October, 2004.

  
\_\_\_\_\_  
Signature

---

**MAIL STOP AMENDMENT**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**STATEMENT FILED PURSUANT TO THE DUTY OF  
DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98**

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicants request consideration of this Information Disclosure Statement.

**PART I: Compliance with 37 C.F.R. §1.97**

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

PART II: Information Cited

The Applicants hereby make of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

The Applicants hereby make the following additional information of record in the above-identified application.

PART III: Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;
3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicants make no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicants, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

Serial No.: 10/812,653  
Conf. No.: 3416


- 3 -

Art Unit: 2814

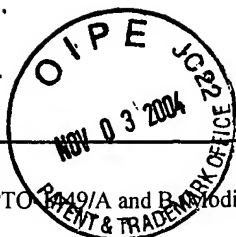
An early and favorable action is hereby requested.

Respectfully submitted,

By:

  
\_\_\_\_\_  
Timothy J. Oyer, Ph.D., Reg. No. 36,628  
Tani Chen, Sc.D., Reg No. 52,728  
Wolf, Greenfield & Sacks, P.C.  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
Telephone: (617) 646-8000

Date: October 29, 2004  
xNDDx



FORM PTO 1049/A and B (modified)

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

Sheet 1 of 2

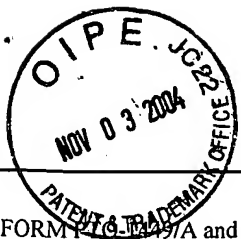
APPLICATION NO.: 10/812,653      ATTY. DOCKET NO.: H0498.70112US01  
 FILING DATE: March 29, 2004      CONFIRMATION NO.: 3416  
 APPLICANT: Charles M. Lieber, et al.  
 GROUP ART UNIT: 2814      EXAMINER: Howard Weiss

## **U.S. PATENT DOCUMENTS**

Examiner's Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication or of issue of Cited Document
		Number	Kind Code		
	1	*4,673,474		Ogawa	June 16, 1987
	2	*4,939,556		Eugchi, et al.	July 3, 1990
	3	*5,089,545		Pol.	February 18, 1992
	4	*5,274,602		Glenn	December 28, 1993
	5	*5,453,970		Rust, et al.	September 26, 1995
	6	*5,475,341		Reed	December 12, 1995
	7	*5,589,692		Reed	December 31, 1996
	8	*5,640,343		Gallagher, et al.	June 17, 1997
	9	*5,739,057		Tiwari, et al.	April 14, 1998
	10	*5,747,180		Miller, et al.	May 5, 1998
	11	*5,751,156		Muller, et al.	May 12, 1998
	12	*5,847,565		Narayanan	December 8, 1998
	13	*5,858,862		Westwater, et al.	January 12, 1999
	14	*5,897,945		Lieber, et al.	April 27, 1999
	15	*5,903,010		Flory, et al.	May 11, 1999
	16	*5,997,832		Lieber, et al.	December 7, 1999
	17	*6,036,774		Lieber, et al.	March 14, 2000
	18	*6,038,060		Crowley	March 14, 2000
	19	*6,060,724		Flory, et al.	May 9, 2000
	20	*6,069,380		Chou, et al.	May 30, 2000
	21	*6,128,214		Kuekes, et al.	October 3, 2000
	22	*6,203,864		Zhang, et al.	March 20, 2001
	23	*6,256,767		Kuekes, et al.	July 3, 2001
	24	*6,346,189		Dai, et al.	February 12, 2002
	25	*6,528,020		Dai, et al.	March 4, 2003
	26	6,781,166	B2	Lieber, et al.	August 24, 2004
	27	*2002/1079434		Dai, et al.	December 5, 2002

EXAMINER:

DATE CONSIDERED:



FORM 100-1249/A and B (Modified)

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

<b>Sheet</b> <b>2</b> of <b>2</b>	<b>APPLICATION NO.:</b> 10/812,653	<b>ATTY. DOCKET NO.:</b> H0498.70112US01
	<b>FILING DATE:</b> March 29, 2004	<b>CONFIRMATION NO.:</b> 3416
	<b>APPLICANT:</b> Charles M. Lieber, et al.	
	<b>GROUP ART UNIT:</b> 2814	<b>EXAMINER:</b> Howard Weiss

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document (not necessary)	Date of Publication of Cited Document MM-DD-YYYY	Translation (Y/N)
		Office/ Country	Number	Kind Code			
	28	JP	*11011917	A2	Canon Inc.	01-19-1999	
	29	WO	*98/39250		Smalley, Richard, E.	09-11-1998	
	30	WO	*98/42620		Kusunoki, Michiko	10-01-1998	
	31	WO	*00/09443		Dai, Hongjie	02-24-2000	
	32	WO	*00/17101		Margrave, John, L.	03-30-2000	
	33	WO	*00/19494		Mancevski, Vladimir;	04-06-2000	
	34	WO	*01/03208		Lieber, Charles, M.	01-11-2001	
	35	WO	*02/17362		Lieber, Charles, M.	02-28-2002	
	36	WO	*02/48701		Lieber, Charles, M.	06-20-2002	

**OTHER ART — NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	37	*C.P. Collier, et al., "Electronically Configurable Molecular-Based Logic Gates," Science, Vol. 285, July 16, 1999, pp. 391-394.	
	38	*J. Chen, et al., "Large On-Off Ratios and Negative Differential Resistance in a Molecular Electronic Device," Science, Vol. 286, Nov. 19, 1999, pp. 1550-1551.	
	39	*Rueckes, Thomas et al., "Carbon Nanotube-Based Nonvolatile Random Access Memory for Molecular Computing," July 7, 2000, Science, Vol. 289, pp. 94-97.	

<b>EXAMINER:</b>	<b>DATE CONSIDERED:</b>
------------------	-------------------------

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

\*a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. 10/033,369, filed October 24, 2001, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).

[NOTE - The Office hereby waives the requirement under 37 CFR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC 371 after June 30, 2003. See 37 CFR 1.491(b). For all patent applications filed on or before June 30, 2003, copies of cited U.S. patents and patent application publications are still required unless an eIDS is filed. Copies of all other patent(s), publication(s), or other information listed must still be provided, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]